

**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for new nonprovisional applications under 37 C.F.R. 1.53(b))

Attorney Docket No.	29284/270
First Inventor	Hisao Kikuchi
Title	Network System and Communication Band Control Method Thereof
Express Mail Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 34]
(preferred arrangement set forth below)
 - Descriptive title of the Invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 7]
5. Oath or Declaration [Total Sheets 4]
 - a. ☐ Newly executed (original or copy)
 - b. ☒ Copy from a prior application (37 CFR 1.63 (d))
(for a continuation/divisional with Box 18 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ Paper
 - c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATIONS PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 C.F.R. 3.73(b) Statement ☐ Power of Attorney
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☒ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☒ Other: Letter To Examiner

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No: 09 / 794,171

Prior application information: Examiner Tri H. Phan

Art Unit: 2661

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

☒ Customer Number

23838

OR ☐ Correspondence address below

Name

Address

City

State

Zip Code

Country

Telephone

Fax

Name (Print/Type)

John C. Altmiller

Registration No. (Attorney/Agent)

25,951

Signature

John C. Altmiller

Date

March 24, 2004

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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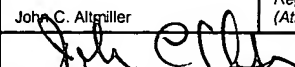
13281 U.S. PTO

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PTO/SB/17 (10-03)
Approved for use through 07/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL for FY 2004		Complete if Known	
Effective 10/01/2003. Patent fees are subject to annual revision.		Application Number	Unassigned
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Filing Date	Herewith
		First Named Inventor	Hisao Kikuchi
		Examiner Name	Unassigned
TOTAL AMOUNT OF PAYMENT (\$) 770		Art Unit	Unassigned
		Attorney Docket No.	29284/270

METHOD OF PAYMENT (check all that apply)		FEE CALCULATION (continued)																																																																																											
<input type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None		3. ADDITIONAL FEES																																																																																											
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<div style="font-size: 0.8em;">The Director is authorized to: (check all that apply) <input checked="" type="checkbox"/> Charge fee(s) indicated below <input checked="" type="checkbox"/> Credit any overpayments <input checked="" type="checkbox"/> Charge any additional fee(s) during the pendency of this application <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.</div>		Fee Code Fee (\$)																																																																																											
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SUBMITTED BY		Complete (if applicable)	
Name (Print/Type)	John C. Altgriller	Registration No. (Attorney/Agent)	25,951
Signature		Telephone	202.220.4200
		Date	March 24, 2004

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Hisao Kikuchi

SERIAL NO.: Unassigned (Continuation of U.S. Serial No. 09/794,171, filed February 27, 2001)

FILED : Herewith

FOR : NETWORK SYSTEM AND COMMUNICATION BAND CONTROL
METHOD THEREOF

ART UNIT : Unassigned

EXAMINER : Unassigned

COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

LETTER

SIR:

Prior to examining this application, the Examiner is respectfully requested to consider the remarks below.

REMARKS

Claims 1-9 are in this application. Claims 1, 6, 7 and 8 in this application correspond to claims 1, 5, 9 and 13 of the parent of this application. Claim 9 is similar to claim 1 but has been written to define structure, rather than means plus function elements.

In the Office Action of December 24, 2003 in the parent, Serial No. 09/794,171, claims 1 and 5 were objected to because of an uncleanness in regard to whether one or more node was involved in certain cases. Each node delivers its own band information to the other nodes in the network and receives the band information from the other nodes in order to update contents of the band information storing means (band information managing table). The band traffic calculating means controls the band traffic of the data communication of the node to which it belongs. This has now been made clear in the claims. Claims 1 and 5 were also rejected under 35 U.S.C. § 112 for similar reasons and for lack of antecedent basis for a number of terms. The claims presented in this application also overcome that rejection.

Claims 1, 5, 9, and 13 were rejected as unpatentable over Kanamaru et al. in view of Chen et al. Applicants believe that such a rejection is improper for the reasons set out in detail below.

Kanamaru (US6,574,197) shows the method of monitoring a network. Each node sends a monitoring packet to the adjacent node and receives a response packet from the adjacent node for detecting the node break away (the status condition). And, the node which detected the adjacent node break away, broadcasts a notification packet to all other nodes to notify them of the node break away (Claim 1).

The application and the claims presented are directed to a method of band control. Each node broadcasts its own band information and receives the band information of other nodes from the other nodes (Figs. 7 and 8). When each node sends the communication data, the node calculates and determines the band traffic for the data according to the band information of that node and the other nodes (Fig. 6).

The status condition of Kanamaru relates to each node and indicates whether the node is alive or dead, while the communication attribute (band information) of the present invention

relates to each communication and includes IP address, port number, band traffic, type etc. Both exchange information's between the nodes but the contents of the information are different.

Chen (US6,487,170) also shows the method of controlling packet flow. Chen is applied to a DiffServ Packet Network. The present invention specification explains "DiffServ" from page 4, line 13 to page 5, line 19. In the DiffServ Packet Network, Chen shows evaluating whether a new premium service which requests the use of a predetermined bandwidth amount can be accepted or rejected (admission control). Such acceptance or rejection is made by bandwidth measurements of output links and input links of the node as described on column 7, lines 6 to 27. Such acceptance or rejection does not depend on the bandwidth utilization in other nodes. Chen shows the Bandwidth Reservation Processing in the DiffServ framework. Figs. 4-6 shows reserving the bandwidth of all nodes on the communication path. It is for reserving the bandwidth for the premium services.

In the presently claimed invention, the node calculates and assigns the bandwidth traffic for the communication data using the bandwidth information of the node and the other nodes. The bandwidth assignment calculation is different from the decision of "accept" or "reject" compared with a predetermined threshold value.

Chen is directed to accomplishing QoS communications in DiffServ Packet Network, while the present invention is for performing bandwidth control in a network handling both QoS communications and Best Effort (BE) communications.

Accordingly, the present invention is different from the cited references in that the band information is collected from all nodes and that bandwidth to be assigned is calculated using the all collected node band information.

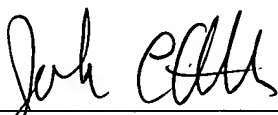
In view of the above, Applicants believe that all claims remaining in this application are in condition for allowance, prompt notice of which is respectfully solicited.

The Examiner is invited to call the undersigned at (202) 220-4200 to discuss any information concerning this application.

The Office is hereby authorized to charge any additional fees under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayment to Deposit Account No. 11-0600.

Respectfully submitted,

Date: March 24, 2004



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